



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

SWA6A-300
Job Sheet 178658



Part No: SWA6A-300

Job Qty: 20 ea

Part Name: Bearing Housing



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 6/5/18

Job Tracking No:

Due Date: 6/22/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG SWA6A-300 Rev3 IPP Rev A 17.11.15 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	20 Ea	6/22/18	6/22/18	0.00	0.00	Start Up Machining-3		
100	Bandsaw	20 pcs	6/22/18	6/22/18	0.00	2.00	Bandsaw1		
110	Mori Seiki	20 pcs	6/22/18	6/22/18	0.00	20.00	MORI NLX		JL
120	QC	20 pcs	6/22/18	6/22/18	0.00	0.00	QC2		JL
130	QC	20 pcs	6/22/18	6/22/18	0.00	0.00	QC8		JL
140	Packaging	20 pcs	6/22/18	6/22/18	0.00	0.00	Packaging3		JL
150	QC21-SA	20 Ea	6/22/18	6/22/18	0.00	0.00	QC21		JL

Part Op 100 - Cut Blanks to 3.375"

Descriptions: 110 - 1-Machine as per DWG. FB706 FOLIO REV: AA DWG REV: 3 2-Debur

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M17-4-H1150-R3.500	17-4 SS H1150 Round Bar 3.500"	5.7000 ft (.285 ea)	90-Start up Operation	<u>SC91272-5-725</u>

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	M17-4-H1150-R3.500	6	8	0

Part Specifications

Specifications could not be found.



Container No: S101948



Part: SWA6A - 300

Job No: 178658

Serial No/Batch: S101948

Revision: 3

Inspector:

Exp Date:

Instructions:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Plex 6/5/18 1:56 PM Dart.lajeunesse.marie

Date: 08/14/18

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table border="0"> <tr> <td>Skid-tube ☐</td> <td>Cross tube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																																						
Large Fab ☐	Composite ☐	Supplier ☐																																																																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																																		
Description Work Order Deviation				Disposition			Completed By																																																																		
							Lead hand / Supervisor Approval Verification																																																																		
							QC / QA Coordinator Approval																																																																		
Root Cause <table border="0"> <tr> <td>Environment ☐</td> <td>No Re-verification ☐</td> <td>Pressure/Forced ☐</td> </tr> <tr> <td>Design ☐</td> <td>Operator ☐</td> <td>Bending ☐</td> </tr> <tr> <td>Doc/Data ☐</td> <td>Offset/Setup ☐</td> <td>Centre Not Concentric ☐</td> </tr> <tr> <td>Equip/Tooling ☐</td> <td>Supplier ☐</td> <td>Cracks ☐</td> </tr> <tr> <td>Handling/Pre ☐</td> <td>Training ☐</td> <td>Crimp/Kink/Ripple/Wave ☐</td> </tr> <tr> <td>Material ☐</td> <td>Use for Testing ☐</td> <td>Cuffs ☐</td> </tr> <tr> <td>Internal Transport ☐</td> <td>Poor Information ☐</td> <td>Crushing ☐</td> </tr> <tr> <td>Tribal Knowledge ☐</td> <td>Rushing ☐</td> <td>Heat Treat ☐</td> </tr> <tr> <td>LOA ☐</td> <td>Product Improvement ☐</td> <td>Wave/Twist in Tube ☐</td> </tr> <tr> <td>Substation ☐</td> <td>Process Improvement ☐</td> <td>Marks/Chatter ☐</td> </tr> <tr> <td>Past Expiry Date ☐</td> <td>Manufacturing Process ☐</td> <td></td> </tr> <tr> <td>Misidentified ☐</td> <td>Past Due ☐</td> <td></td> </tr> </table>				Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Design ☐	Operator ☐	Bending ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Past Expiry Date ☐	Manufacturing Process ☐		Misidentified ☐	Past Due ☐		FAULT CATEGORY <table border="0"> <tr> <td>Temperature/Cure ☐</td> <td>Power Loss/Surge ☐</td> <td>Positioned Wrong ☐</td> </tr> <tr> <td>Set-up ☐</td> <td>Folio/Program ☐</td> <td>Outside Dimensions ☐</td> </tr> <tr> <td>BOM/Route ☐</td> <td>Grain ☐</td> <td>Over/Under tolerance ☐</td> </tr> <tr> <td>Broken/Damage/Defect ☐</td> <td>Weld ☐</td> <td>Part Incorrect ☐</td> </tr> <tr> <td>Inspection Incomplete/Unqualified ☐</td> <td>Wrong Stock Pulled ☐</td> <td>Part Lost/Missing ☐</td> </tr> <tr> <td>Contamination ☐</td> <td>Out of Sequence ☐</td> <td>Part Moved ☐</td> </tr> <tr> <td>Countersink ☐</td> <td>Off-set ☐</td> <td>Drawing ☐</td> </tr> <tr> <td>Cut Too Short ☐</td> <td>Mislabeled ☐</td> <td>Finish ☐</td> </tr> <tr> <td>Instructions Incomplete/Unclear ☐</td> <td>Fit/Function ☐</td> <td>Misread ☐</td> </tr> <tr> <td>Drill Holes ☐</td> <td>Misaligned/off center ☐</td> <td>Turning Sequence ☐</td> </tr> </table>				Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Countersink ☐	Off-set ☐	Drawing ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Environment ☐	No Re-verification ☐	Pressure/Forced ☐																																																																							
Design ☐	Operator ☐	Bending ☐																																																																							
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐																																																																							
Equip/Tooling ☐	Supplier ☐	Cracks ☐																																																																							
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐																																																																							
Material ☐	Use for Testing ☐	Cuffs ☐																																																																							
Internal Transport ☐	Poor Information ☐	Crushing ☐																																																																							
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐																																																																							
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐																																																																							
Substation ☐	Process Improvement ☐	Marks/Chatter ☐																																																																							
Past Expiry Date ☐	Manufacturing Process ☐																																																																								
Misidentified ☐	Past Due ☐																																																																								
Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																																																																							
Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																																																																							
BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																																																																							
Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																																																																							
Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																																																																							
Contamination ☐	Out of Sequence ☐	Part Moved ☐																																																																							
Countersink ☐	Off-set ☐	Drawing ☐																																																																							
Cut Too Short ☐	Mislabeled ☐	Finish ☐																																																																							
Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																																							
Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																							
OTHER :																																																																									

DART AEROSPACE LTD		Work Order:	178658
Description: SWAGA-300		Part Number:	SWAGA-300
Inspection Dwg: SWAGA-300	Rev: 3	Page 1 of 1	

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
3.425	$\pm .005$	3.4245	✓		mic-GA10	
3.223	$\pm .005$	3.224	✓		H-G	
.709	$\pm .005$	.709	✓		H-G	
2.32	$\pm .01$	2.319	✓		VERO JLTU	
R.25	$\pm .01$	R.25	✓			
.04x45°	$\pm .01 \pm .5^\circ$	.04x45°	✓			
3.182	$\pm .006$	3.1805	✓		mic-112-177	
3.005	$\pm .005$	3.006	✓			
.188	$\pm .005$	.188	✓			
1.431	$\pm .003$	1.432	✓			
.120	$\pm .005$	.121	✓			
.645	$\pm .005$	.646	✓			
.142	$\pm .005$	.143	✓			
.959	$\pm .005$	.959	✓		H-G	
.105	$+0 \pm .005$	.103	✓			
.03x45°	$\pm .01 \pm .5^\circ$	.03x45°	✓			
.02x45°	$\pm .01 \pm .5^\circ$	.02x45°	✓			
1.969	$\pm .002 -0$	1.9698	✓			
2.1247	$+0 \pm .0007$	2.1245	✓			
R.015	$+0 \pm .005$	R.015	✓			
R.030	$\pm .005$	R.03	✓			
2.559	$\pm .003 -0$	2.560	✓			
2.640	$\pm .005$	2.639	✓			
3.063	$\pm .005$	3.061	✓			
3-16 un2B	$90-110 90$	98	✓			
.103	$\pm .005 -0$	.1045	✓			

Measured by:		Checked by:		QC Inspector:	
Date:	18-8-13	Date:	18-08-14	Date:	

Engineering Approval: (If necessary)		Date:	
--	--	--------------	--

Rev	Date	Change	Revised by	Approved
A	14.07.31	New Issue	KJ	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

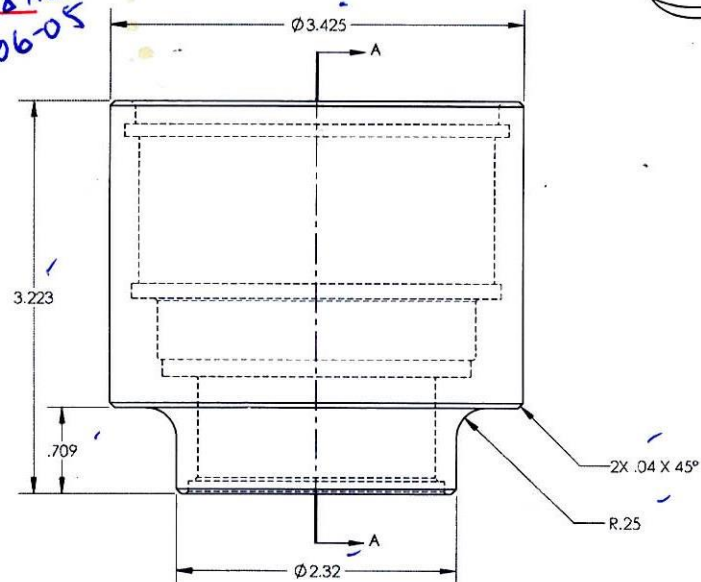
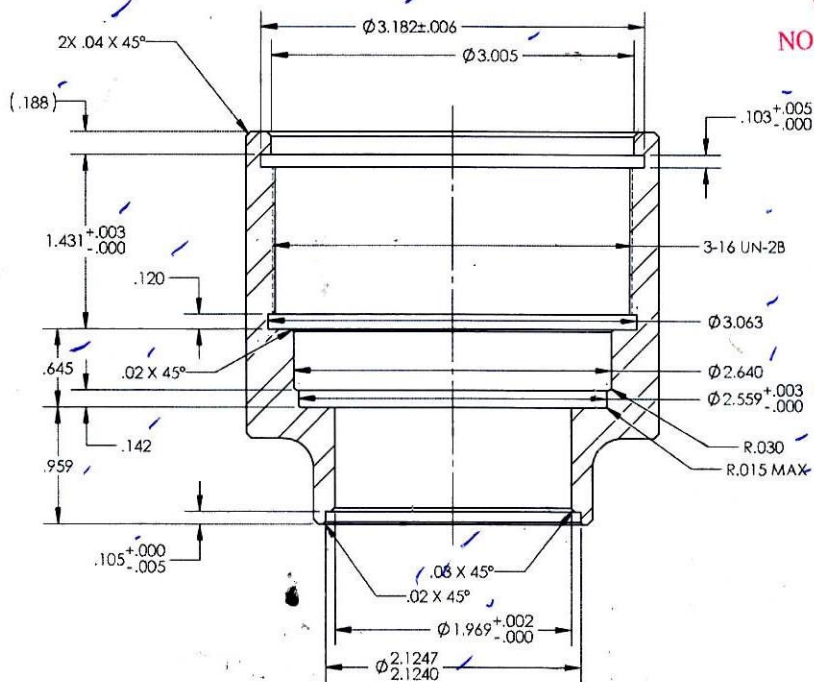
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

This drawing, specifications, and concepts contained herein are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Engine, Inc.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 178658 HCS
180605

REVISIONS				
REV	ECR	DESCRIPTION	DATE	INITIAL
1		AS DRAWN BY CANAM	11/19/2012	JAG
2		CHD TOLERANCE FROM Ø2.125+00/-001, ADDED H.150 SPEC TO MATERIAL CALLOUT	11/19/2012	JAG
3	15-0305	UPDATED TO NEW DRAFTING STANDARDS. ADDED MATL OPTION 1075. CHD TOLERANCE ON NON-CRITICAL DIMENSIONS.	10/16/2015	DPD



ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS
			SWA6A-300	1	BEARING HOUSING	SS 17-4 H1150/H1075	

DART AEROSPACE	
TITLE: BEARING HOUSING	
DWG NO. SWA6A-300	REV 3
MATL: SS 17-4 H1150/H1075	DRAWN BY: CANAM
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	APPROVED: <i>P. Wild</i>
.XXX ± .005	FRACTIONS ± 1/8
.XX ± .01	ANGLES ± 5°
.X ± .1	SPEC
1. BREAK ALL SHARP EDGES .015 X 45°	USED ON MODEL
OR .015R	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE 1:1	DATE 2/1/2002
SHEET 1 OF 1	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					